

REMARKS

Applicants have carefully considered the matters raised by the Examiner in the outstanding Office Action but remain of the opinion that patentable subject matter is present. Applicants respectfully request reconsideration of the Examiner's position based on the above amendments to the claims, the attached drawings, and the following remarks.

Claims 1-20 had been examined in the previous Office Action. Claims 6 and 7 have been amended herein to use the transitional phrase "consists essentially of". The rest of the claims remain the same.

The drawings had been objected to as containing copy marks which were not acceptable. This application is a PCT application and it is presumed that there is a set of drawings in the file as provided for by the International Bureau and which were approved by the International Bureau. These drawings should have no copy marks on them. In any event, enclosed herewith is a set of drawings having no copy marks on them.

Claims 6 and 7 had been rejected as being anticipated by GB 2210882 to Clarke. Clarke is directed to a composition which is used for lining a pipe. Nowhere in Clarke does it specifically teach the combination of microsilica and talc in the amounts set forth in claims 6 and 7. Claims 6 and 7 are amended herein to

recite that this filler blend consists essentially of talc and microsilica. As brought out in the instant application, the combination of talc and microsilica provide unique properties to thermoplastic resins which incorporate the unique filler of the present invention. Clarke does not teach nor suggest a filler for thermoplastic resins which consists essentially of talc and microsilica in a weight ratio between 15:1 and 1:15. Respectfully, the filler blend of claims 6 and 7 is patentable over the teachings of Clarke.

example shown - 2/2
ratio offers
synergistic effect

Claims 1-14 and 16-19 had been rejected as being unpatentable over the teachings of Sack. Sack teaches a pulverulent polymer composition which is made by drying a mixture of particulate mineral carrier and aqueous polymer dispersion. Sack also teaches that this pulverulent polymer composition can be incorporated into hot initial charges such as hot bitumen melts. Sack further teaches that the aqueous polymer dispersion along with the mineral carrier can be combined with a dry material or adhesive such as cement to form a tack-free free-flowing pulverulent reinforced building material. Applicants respectfully submit that Sack does not teach or suggest the specific filler of the present invention because Sack does not teach specifically combining microsilica with talc; and does not teach the specific weight ratio of between 1:15 and 15:1 of microsilica to talc.

What one
would have found
obvious
- suggests to the
skilled artisan

The only teaching of microsilica in Sack appears in Examples 3 and 4 and in claim 5. It should be noted that the general teachings of Sack with respect to mineral carriers is recited at column 3, lines 37-44 and does not mention microsilica. The only mention of microsilica is in Examples 3 and 4 and in claim 5.

Turning to Example 3 at column 7 of Sack, it will be noted that the microsilica is combined with quartz sand and quartz flour. The weight ratio of microsilica to the quartz sand and quartz flour is 1:28. This is clearly outside the claimed range of the present invention. *nothing to do with quartz flour*

It is noted that the quartz sand has a mean particle size which is at the upper limit of the particle size for the mineral carrier recited in Sack. If one presumes that quartz flour and microsilica were intended to be the mineral carrier, the weight ratio of microsilica is still outside that of the claimed range because the weight ratio of microsilica to quartz flour is 1:20. Thus, Example 3 of Sack does not lead one of skill in the art to either a filler which is a combination of talc and microsilica, or that the microsilica should be combined with talc in a weight ratio of 1:15 to 15:1.

Turning to Example 4, Sack uses quartz sand, chalk and microsilica. Again, the weight ratio of microsilica to the

combined quartz sand and chalk is 1:28. As with Example 3, the quartz sand has a particle size which is at the upper end of the particle size for the mineral carrier recited in Sack. Thus, if one assumes the chalk and microsilica are the intended mineral carriers, then the weight ratio of microsilica to chalk is still outside the claimed range because Example 4 of Sack has a microsilica to chalk weight ratio of 1:20.

With respect to claim 5, microsilica and talc are recited as being mineral carriers. Claim 5 also recites that mixtures of those mineral carriers can be used. Claim 5 recites some 15 different mineral carriers. Furthermore, claim 5 does not specify the weight ratio of those mineral carriers to each other. Thus, it is submitted that one of skill in the art when looking at claim 5 would not be led to the combination of microsilica and talc as a filler and would not be led to the specific weight ratio of talc to microsilica as recited in the claims of the present invention.

X Furthermore, it is submitted that Sack teaches away from a combination of talc and microsilica because at column 3, line 38-44, microsilica is not mentioned as one of the examples of mineral fillers. Clearly, when reading Sack, one recognizes that microsilica was an afterthought by Sack. Microsilica is not intended to be one of the mineral carriers.

but in claim

Examples 3 and 4 are directed to a polymer modified cement. It is submitted that the microsilica which is referred to in both those examples was actually intended as an additive to the cement and not to act as a mineral carrier, albeit, that the size of the microsilica fell within the range of the size of the mineral carrier recited in Sack.

It should also be noted that Sack teaches that any polymer can be used in his composition. See specifically column 2, line 53+. The claims of the present invention are directed specifically to a thermoplastic resin and not any polymer. Applicants' invention as recited in claims 1-5 and 8-20 is directed to a thermoplastic resin composition which employs a filler comprising a combination of talc and microsilica and a specific weight ratio of 15:1 to 1:15. Sack clearly does not teach this specific combination and it is submitted that one of skill in the art is not directed to such a composition because nowhere in Sack does he teach the combination of talc and microsilica and a weight ratio of 15:1 to 1:15.

One of the novel aspects of the present invention is the discovery that the combination of talc and microsilica in the specified weight percents results in a thermoplastic material having high impact strength while maintaining a good stiffness. Sack mentions nothing about a thermoplastic material that has both high impact strength and good stiffness. Sack is primarily

concerned with building materials such as asphalt, cement, plaster, concrete, etc. See column 4, line 47+. Nowhere in Sack does he specify that any of his materials can be used strictly as a thermoplastic resin composition which can be used to produce a structural article made of thermoplastic that has both high impact strength and good stiffness. As brought out in the examples in the instant application, this is the primary purpose of the present invention, to produce an article made of a thermoplastic resin composition wherein the article has high impact strength and good stiffness. Respectfully, the present invention is patentable over the teachings of Sack.

Claims 15 and 20 had been rejected as being unpatentable over a combination of Sack and Lundgard. Lundgard is used primarily to teach that it is conventional to use an extrusion device for compounding. Applicants do not disagree with the teachings of Lundgard or the fact that extrusion is a common way of compounding. Applicants' position is that Sack does not teach or suggest the present invention as discussed above. Furthermore, applicants submit that Lundgard does not teach or suggest the invention as presented in this application. Thus, the present invention is not taught or suggested by Sack or Lundgard taken alone or in combination.

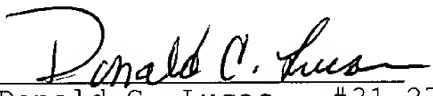
In view of the foregoing, it is respectfully submitted that the application is in condition for allowance and such action is respectfully requested. Should any fees or extensions of time be necessary in order to maintain this application in pending condition, appropriate requests are hereby made and authorization given to debit account #02-2275.

Respectfully submitted,

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Stiffness of talc/EMS in PP copolymer

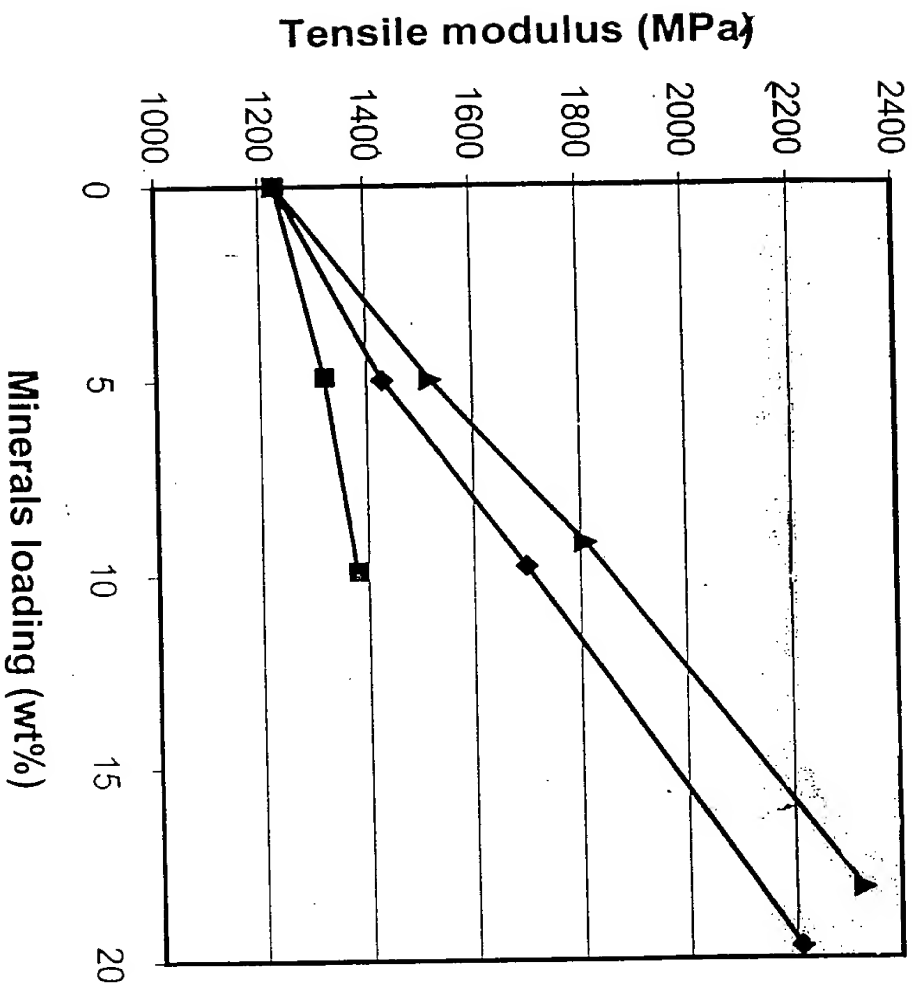
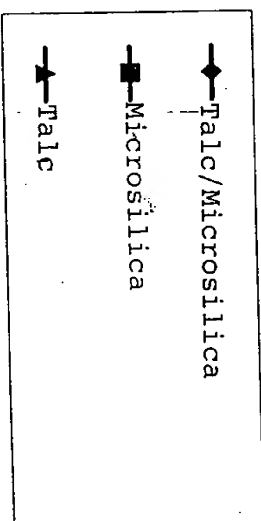


FIGURE 1



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Impact strength of talc/EMS in PP copolymer

